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EXAMINER

NGUYEN, HOAN C

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Continuation of 11 does NOT place the application in condition for allowance because:**

***Response to Arguments***

Applicant's arguments filed on 04/14/2009 have been fully considered but they are not persuasive.

Applicant's ONLY arguments are follows:

A. Applicants respectfully believe that the De Lang reference does not describe each and every element of claim 6, including the analyzer positioned at the output of the interferometer, the analyzer having a variable polarization state and tuning the interferometer as a function of the polarized first interference beam and the second interference beam, wherein an additional phase is introduced into at least one of the interference beams so that the interference fringe pattern is displaced by a distance.

The structure of the claimed invention is, as explained in the Specification, to provide a vibration-free system in which measurements can be made in a more accurate manner.

Such a system is not believed to have been available or obvious to one of ordinary skill in the art at the time of invention given the improvement of measuring accuracy. If such were at least obvious, it is believed that such a system would have been in use.

B. For purposes of the present invention, the Sharp reference does not cure the deficiencies of the De Lang reference. The Sharp reference appears to concern a liquid

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crystal phase modulator using cholesteric circular polarizers, where a phase modulator has an electro-optically rotatable smectic liquid crystal half-wave retarder in combination with a cholesteric liquid crystal circular polarizer. The Sharp reference mentions using liquid crystal cells which have optic axes which are rotatable upon application of an electric field, and to increase the tuning range more than one smectic liquid crystal cell is used in series. The Sharp reference does not appear to teach or suggest using an analyzer in the manner described or in such a system structure as described, such as that required in the rejected claims of the present invention, to tune an interferometer.

Examiner's responses to Applicants' ONLY arguments are follows:

A. De Lang discloses a tunable interferometer using a rotated analyzer 10 (col. 2 lines 58-75, col. 3 lines 16-40) as having a variable polarization state and tuning the interferometer as a function of the polarized first interference beam and the second interference beam, wherein an additional phase is introduced into at least one of the interference beams so that the interference fringe pattern is displaced by a distance corresponding to the height of the measured object.

Furthermore, claims 6-27 do not cite "the structure of the claimed invention is to provide a vibration-free system in which measurements can be made in a more accurate manner"; therefore, this argument is irrelevant.

Applicants also mention "invention given the improvement of measuring accuracy", what element in the system will improve measuring accuracy? Improvement

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compares to what system? Applicants should provide the evidence of this improvement comparing to De Lang.

B. The Sharp reference mentions using the optical phase modulation in the interferometer for polarizing, thus this optical phase modulation may act as and functions like the analyzer in the interferometer to tune a phase delay (col. 2 lines 20-46).

Applicants should give more information for tunable liquid crystal elements in the claims 9, 15, 20 and 26 based the specification to clarify the differences between the invention and the applied prior arts.